Commissioner Robert Powelson
Senate Committee on Energy and Natural Resources
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Good morning, Chairman Murkowski, Ranking Member Cantwell and members of the Committee. First off, thank you for bringing us together here. Although it took a decade to get us back, I'm proud to report the band is back together for a reunion tour here.

Since joining the Commission last August I have thoroughly enjoyed the opportunity to work with my colleagues in a bipartisan manner to address some of the complex issues facing the energy marketplace. Today, my testimony will focus on two areas. First, I will discuss the electric grid and its changing dynamics in the evolving aspect of consumer preferences, technology, innovation, and of course state policy initiatives. Second, I'll also pick up where Senator, excuse me, Commissioner Chatterjee left off on cybersecurity.

So let me start this morning by saying the nation's bulk power system has seen over the last decade some tectonic shifts. There are several drivers behind these shifts. First is the participation of renewable energy as part of our bulk power system dispatch. In fact last year in this country 10% of our bulk power came from renewable energy resources.

I also want to set forth in my conversation with you today some data points. Today in the US there is over 27 GW of installed solar capacity on the grid; in 2005 that number was 2.5 GW. Today there is 90 GW of installed wind capacity on the grid; in 2005 that number was less than 10 GW. So I share that with you because it kind of shows you some of the evolution of our bulk power system. Obviously, it's getting cleaner, it's getting efficient, and technology and states and leadership of the FERC and state public utility commissions are driving that.

The second driver I see behind the evolving grid is the shale revolution. Due to the advancements in production and technology many parts of the country are experiencing one of the greatest generation fuel mix in our history today. Today natural gas represents 32% of the overall dispatch compared to only 19% back in 2005. In fact, in my home state we are producing 16 Bcf/day of natural gas with over 500 trillion cubic feet of supply. In 2010 we were only producing 3 to 4 Bcf of natural gas and let me add that in 2004 that is when we embarked on the first exploratory well in the Marcellus region of Pennsylvania. So just another data set to look at in terms of the evolution of natural gas production in our country. As Commissioner Chatterjee mentioned, in 2008 as a country we were importing natural gas into this country. Today, we are approving LNG export licenses, one nearby that I recently toured is the Cove point facility.

Now with the advent of large-scale battery storage and distributed energy resources, innovation is providing another important driver on the horizon for the bulk power system. I think in recognition of this the Commission, as Sen. Cantwell mentioned, issued FERC Order 841, which directed grid operators to remove barriers to participation in the electric storage resource marketplace. And I think again this is another benefit not only to the overall power system, but it's also a tremendous opportunity for states like California and Pennsylvania to adopt these new technologies.

Add to this equation the evolution of distributed energy resources, DERs, and we are seeing a whole new grid emerge. In fact according to a NERC report, DERs have the capability to ride through disturbances, contribute reliability services and follow dispatch signals. These new technologies have the potential to turn the once one-directional, centralized electric grid into a multidirectional, decentralized grid that utilizes technology innovation to produce

consumer benefits and increase reliability and resilience to the overall bulk power system. And I should share with you, as were setting up a conversation about renewable investment and the evolution of gas plays like Marcellus, is look at the EIA data. It says that for the first time since 1970 in our country the bulk power system has emitted less CO2 than our transportation sector. Again, a reconfirmation, a reaffirmation of where our grid is headed.

As a former state regulator from the great Commonwealth of Pennsylvania I came to the FERC with a very unique perspective. I understand how important it is for states to have the ability to craft their energy goals and futures. And I also think it's important, as it was mentioned earlier by my colleagues, I think the term “tailored regional solutions” is something that is alive and well in how the FERC is conducting its affairs.

I also want to reiterate to this Committee, the FERC does not pick winners and losers in the market. Instead, we create an environment where the market can pick the winners and losers. And while we’re talking about winners and losers I want to take this opportunity to really focus in on the topic that is so critically important to all of us, and that is the protection of our grid and the cyber threats that are constantly evolving.

I'll talk later this morning about that, but I just want to take this opportunity to commend the work that's been done here at the FERC. I’m proud to report that in the past 12 months, the FERC has conducted over a dozen training and network sessions with state public utility commissions, we’ve developed and distributed cyber checklists to state commissions – my state was one of them before I joined the FERC. We developed incident report response procedures with the state of New Hampshire. We conducted meetings and prepared white papers on security considerations for moving cloud-based architecture. We provided assistance to technical reviews of state cyber plans, and we worked with other state and federal agencies to provide both unclassified and classified briefings.

So I'm very proud of the work that's being done but this is a work in progress for all of us, whether it's the FERC, the DOE, or back in our home states with our state police, our state public utility commissions.

Let me conclude by thanking the Committee for bringing us here today, and I look forward to your questions.